

## PATENT ABSTRACTS OF JAPAN

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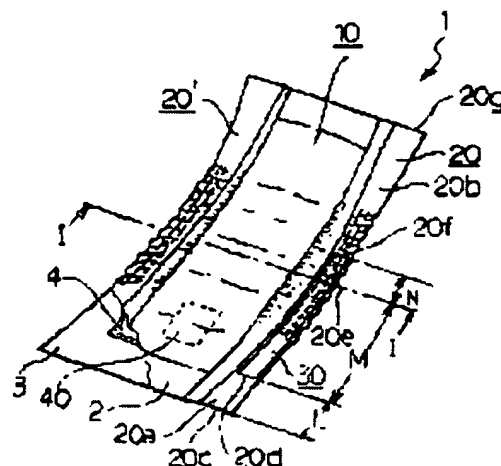
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## (54) DISPOSABLE DIAPER FOR MAN

(57)Abstract:

PROBLEM TO BE SOLVED: To assemble a diaper without fail at the time of wearing and further to hardly leak liquid.

SOLUTION: A disposable diaper 1 is provided with a liquid permeable top sheet 2, liquid impermeable back sheet 3 and absorber 4 arranged between both these sheets, is practically formed longitudinally long and has a central absorber part 10 positioned at the central part of breadthwise direction and a pair of side flaps 20 and 20' respectively positioned on both left and right sides in the lengthwise direction of central absorber part 10. One side flap 20 is provided with a fixing part 30 for diaper assembly in the shape of narrow band along the lengthwise direction of diaper, an adhesive part 40 for diaper fixture is provided on the surface of back sheet 3 at the central absorber part 10, and the fixing part 30 and adhesive part 40 are respectively covered with a released paper.



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CLAIMS

[Claim(s)]

[Claim 1] The top sheet of liquid permeability, the backseat of liquid impermeability, and the absorber arranged among both [ these ] sheets are provided. In the disposable diaper for males which has the side flap of the pair located in the longitudinal direction right-and-left both sides of the central absorber section which it comes to form longwise substantially and is located in a crosswise center section, and this central absorber section, respectively The fixing section for thin band-like diaper assemblies is prepared in one above-mentioned side flap along with the longitudinal direction of a diaper, and in the front face of the above-mentioned backseat in the above-mentioned central absorber section It is the disposable diaper for males which the adhesion section for diaper immobilization is prepared and is characterized by what the above-mentioned fixing section and the above-mentioned adhesion section are covered with the releasing paper for, respectively.

[Claim 2] Either is a disposable diaper for males according to claim 1 with which it is characterized by the thing of the above-mentioned side flap for which the elastic member is allotted along with the longitudinal direction at least.

[Claim 3] It is the disposable diaper for males according to claim 1 which a water-repellent member is attached to the above-mentioned side flap, and the hydrophobic solid guard is formed in it, and is characterized by preparing the above-mentioned fixing section in the front face of this water-repellent member.

[Translation done.]

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## DETAILED DESCRIPTION

## [Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention is easy to equip and relates to the disposable diaper for males excellent in liquid leakage-at-bulb tightness.

[0002]

[Description of the Prior Art] Conventionally, various disposable diapers for males of the type which wraps and uses male sex organs are proposed, and what is shown in drawing 1 as a typical thing is mentioned. It is the perspective view showing the process in which drawing 1 is a drawing in which the conventional example of the disposable diaper for males is shown here, and drawing 1 (a) is the perspective view showing the conventional disposable diaper for males, and assembles the disposable diaper for males which shows drawing 1 (b) to drawing 1 (a), and drawing 1 (c) is the perspective view showing the busy condition of the disposable diaper for males shown in drawing 1 (a).

[0003] As shown in drawing 1 (a), the conventional disposable diaper 101 for males possesses the top sheet 102 of liquid permeability, the backseat 103 of liquid impermeability, and the absorber (not shown) arranged among both [ these ] sheets, and is formed longwise substantially. Moreover, it is formed by the above-mentioned top sheet 102, the backseat 103, and the above-mentioned absorber, is formed of the central absorber section 110 located in a crosswise center section, and the above-mentioned top sheet 102 and the above-mentioned backseat 103, and has the side flap 120 of the pair located in the longitudinal direction right-and-left both sides of this central absorber section 110, respectively. Moreover, an elastic member 122 is allotted to the longitudinal direction abbreviation center section by the above-mentioned side flap 120, and gathers 121 are formed in it, respectively, and in case the above-mentioned disposable diaper 101 for males is used As shown in drawing 1 (b), bend the end of a diaper to the above-mentioned top sheet 102 side, turn up the other end on the backseat of this end further, and a diaper is fixed through the fixing section 130 which applied the binder and was formed. As shown in drawing 1 (c), it is considered as the shape of a condom, and it was further used by making it adhere to other disposable diapers and underwear through the adhesion section 140.

[0004] However, although the direction of the adhesion of the above-mentioned fixing section is made more strongly than the adhesion of this above-mentioned adhesion section in order to maintain the assembly condition of this diaper, the above-mentioned conventional disposable diaper for males Since it was easy to mistake this adhesion section and this fixed part in case a diaper is assembled, there was a problem that it became difficult to fix firmly and to remove during wearing the problem of being easy to separate from a diaper, and this disposable diaper for males at other disposable diapers etc. Moreover, since the rectangle-like thing was [ only being prepared in a part of backseat, and ], even if it assembled the above-mentioned adhesion section in the shape of a condom, it had the problem that a clearance was generated in a point and a liquid spill arose.

[0005] Therefore, the purpose of this invention cannot be mistaken in the assembly of a diaper at the time of wearing, can perform it, and is to offer the disposable diaper for males which a liquid spill moreover cannot produce easily.

[0006]

[Means for Solving the Problem] As a result of inquiring wholeheartedly that this invention persons should solve the above-mentioned technical problem, the disposable diaper for males which prepared the adhesion section in the liquid transparency side side carried out the knowledge of the ability to attain the above-mentioned purpose.

[0007] This invention is made based on the above-mentioned knowledge. The top sheet of liquid permeability, The backseat of liquid impermeability and the absorber arranged among both [ these ] sheets are provided. In the disposable diaper for males which has the side flap of the pair located in the longitudinal direction right-and-left both sides of the central absorber section which it comes to form longwise substantially and is located in a crosswise center section, and this central absorber section, respectively The fixing section for thin band-like diaper assemblies is prepared in one above-mentioned side flap along with the longitudinal direction of a diaper, and in the front face of the above-mentioned backseat in the above-mentioned central absorber section The adhesion section for diaper immobilization is prepared and the above-mentioned fixing section and the above-mentioned adhesion section offer the disposable diaper for males characterized by what is covered with the releasing paper, respectively.

[0008]

[Embodiment of the Invention] Hereafter, the disposable diaper for males of this invention is further explained to a detail with reference to a drawing. One gestalt of the disposable diaper for males of this invention is explained with reference to drawing 2 - drawing 5 . Here, drawing 2 is the I-I sectional view of the disposable diaper for males which is a fracture perspective view a part and shows drawing 3 to drawing 2 showing the 1st gestalt of the disposable diaper for males of this invention. Moreover, drawing 4 is the perspective view showing the process which assembles the disposable diaper for males shown in drawing 2 , and drawing 5 is the perspective view showing the busy condition of the disposable diaper for males shown in drawing 2 .

[0009] The disposable diaper 1 for males of this gestalt shown in drawing 2 and drawing 3 possesses the top sheet 2 of liquid permeability , the backseat 3 of liquid impermeability , and the absorber 4 arranged among both [ these ] sheets , and has the side flap 20 of the pair located in the longitudinal direction right and left both sides of the central absorber section 10 which it comes to form longwise substantially and is located in a crosswise center section , and this central absorber section 10 , respectively .

[0010] Furthermore, if it explains in full detail, as shown in drawing 3 , the above-mentioned central absorber section 10 sticks the above-

mentioned top sheet 2, the above-mentioned backseat 3, and the above-mentioned absorber 4 on one by the well-known approach conventionally, and is formed. Moreover, the above-mentioned side flap 20 of a pair and 20' A backseat 3 and the above-mentioned top sheet 2 stuck on this central absorber section 10 side by the heat-sealing method etc. at this backseat 3. In two elastic members 6 allotted through adhesives etc. on the above-mentioned backseat 3, and this backseat 3 top It is formed of the water-repellent member 5 which stuck by the heat-sealing method etc., was put together, and was attached to this backseat 3 so that this top sheet 2 and this elastic member 6 might be \*\*\*\*(ed).

[0011] Moreover, the above-mentioned elastic member 6 is formed in the above-mentioned side flap 20 and the longitudinal direction abbreviation center section of 20', and thereby, gathers are formed. Moreover, the above-mentioned water-repellent member is a band-like member, crosswise 1 side edge is made with the free end, and elastic member 5a is allotted to this one side edge. By attaching the above-mentioned water-repellent member 5 to the above-mentioned side flap 20 and 20', the hydrophobic solid guard is formed of this water-repellent member 5, and the liquid-spill prevention engine performance is improving.

[0012] Moreover, what carries out the following, respectively can be used as the above-mentioned top sheet 2, the above-mentioned backseat 3, the above-mentioned absorber 4, the above-mentioned elastic member 6, and the above-mentioned water-repellent member 5.

[0013] A thing with the feel near [ in the liquid permeability sheet which makes excrement penetrate to an absorber 4 ] an underwear as an ingredient of the above-mentioned top sheet 2 is desirable, and textile fabrics, a nonwoven fabric, a porous film, etc. are preferably mentioned as such a liquid permeability sheet, for example. Moreover, on the above-mentioned top sheet 2, it can give a water-repellent finish by the approach of applying hydrophobic compounds, such as silicon system oils and paraffin wax, to the periphery section, and the approach of applying a hydrophilic compound like alkyl phosphoric ester to the whole surface beforehand, and subsequently washing the periphery with warm water, and the leakage at bulb by blot of the urine in the periphery section etc. can be prevented.

[0014] the film which consists of polyolefines, such as polyethylene, etc. is used as an ingredient of the above-mentioned backseat 3, the sheet of steamy permeability which makes the liquid impermeability and steam which added and extended the filler to thermoplastics preferably penetrate is used, and the composite of the film and nonwoven fabric of \*\*\*\*\* or the composite material of a film and textile fabrics is used for a thing with the feel near an underwear, for example, a backseat, in embossing processing.

[0015] What used split pulp as the principal member and used the macromolecule water absorption polymer together as an ingredient of the above-mentioned absorber 4 is desirable, in addition what was heat-treated into the mixture of thermoplastics, cellulose fiber, or a macromolecule water absorption polymer is desirable. Macromolecule water absorption polymer's existence locations may be the upper layer, a middle lamella, and lower layer any, and may be mixed with pulp. It has the engine performance which absorbs and holds the liquid of 20 times or more of a self-weight, a macromolecule water absorption polymer has the desirable particle-like thing which has the property to gel, and the saponification object of a starch-acrylic-acid (salt) graft copolymer, the bridge formation object of a sodium carboxymethyl cellulose, its acrylic-acid (salt) polymer, etc. are desirable as such a macromolecule water absorption polymer.

[0016] Although it can use without a limit especially if it is the elastic member usually used for absorptivity goods, such as a disposable diaper, as the above-mentioned elastic member 6, as for the configuration, it is desirable that he is a string-like. Moreover, the above-mentioned elastic member 5a can also be formed using the same ingredient as this elastic member 6.

[0017] As the above-mentioned water-repellent member 5, the suction heat bond nonwoven fabric formed with polypropylene,

polypropylene / polyethylene bicomponent fiber, etc., a point bond nonwoven fabric, a span bond nonwoven fabric, etc. are mentioned.

[0018] \*\* and it sets to the disposable diaper 1 for males of this gestalt. As shown in drawing 2 and drawing 3, the fixing section 30 for thin band-like diaper assemblies is formed in one above-mentioned side flap 20 along with the longitudinal direction of a diaper. The adhesion section 40 for diaper immobilization is formed in the front face of the above-mentioned backseat 3 in the above-mentioned central absorber section 10, and the above-mentioned fixing section 30 and the above-mentioned adhesion section 40 are covered with releasing papers 31 and 41, respectively.

[0019] Furthermore, a detailed explanation forms the above-mentioned fixing section 30 in the front face of the above-mentioned water-repellent member 5. Moreover, the above-mentioned fixing section 30 is formed so that 20d of the end may be located near the end marginal 20c of a diaper and 20f of the other end may be located in 20g side of other ends of a diaper rather than center line 20e to the longitudinal direction of a diaper. And as for the spacing L with the 20d of the above-mentioned ends, and top Norikazu edge 20c, it is desirable that it is 0-100mm, as for the spacing N with the 20f of the above-mentioned other ends, and the above-mentioned center line 20e, it is desirable that it is -10-30mm, it is still more desirable that it is 0-30mm, and as for die-length M+N of the above-mentioned fixing section 30 it is desirable that it is 75-215mm, and it is still more desirable that it is 85-215mm. Thus, although it is desirable that the other end 20 is located in 20g side of other end edges of a diaper a little from the above-mentioned center line 20, since this fixing section 30 will be exposed at the tip of a condom (inside of a diaper) if it is in 20g side of other end edges, the above-mentioned fixing section 30 is not so desirable.

[0020] Moreover, the above-mentioned fixing section 30 is formed by applying a binder on above-mentioned firm attachment section 20'. This fixing section 30 is formed by the binder which sticks more firmly than the above-mentioned adhesion section 40, and rubber system hot melt adhesive etc. is mentioned as the above-mentioned binder which forms this fixing section 30.

[0021] Moreover, the above-mentioned adhesion section 40 is formed in the front face of the above-mentioned backseat 3 in the abbreviation center section by the side of diaper top Norikazu edge at the time of dividing diaper into three equally at the longitudinal direction 20c (part in which the above-mentioned fixing section 30 is formed). It can carry out without making a mistake in the assembly of a diaper without checking the rear-face side (backseat side) of a diaper one by one, in case a diaper is assembled by forming the above-mentioned adhesion section 40 in the Norikazu edge when the above-mentioned fixing section 30 is formed 20c side. Moreover, this adhesion section 40 is formed by applying a binder on the above-mentioned backseat 3, and rubber system hot melt adhesive etc. is mentioned as this binder.

[0022] And first, as shown in drawing 4, the above-mentioned disposable diaper 1 for males After removing the above-mentioned releasing paper 31 and exposing the fixing section 30, the 20g of the above-mentioned other ends is aslant folded up by making it into the central point near [ above-mentioned ] the center line 20e by the side of above-mentioned firm attachment section 20'. Subsequently As shown in drawing 5, use can be presented by turning up the above-mentioned end 20c side so that the bending section 23 in which the fixing section 30 turned up the 20g of the above-mentioned other ends, and was formed may be met, considering as the shape of a condom in which the point sharpened, removing the above-mentioned releasing paper 41 further, and exposing the adhesion section 40.

[0023] Since the disposable diaper 1 for males of this invention does not need to assemble a diaper like [ since it is constituted as mentioned above ] the conventional diaper shown in drawing 1, checking the location of the fixing section and the adhesion section, it can

perform wearing actuation (assembly of a diaper) of a diaper easily. Moreover, since adhesion immobilization of the tip section at the time of the disposable diaper 1 for males of this gestalt being formed so that 20f of other ends of the above-mentioned fixing section 30 may be located in 20g side of other ends of a diaper rather than center line 20e to the longitudinal direction of a diaper, and assembling in the shape of a condom is carried out by this fixing section 30, positioning at the time of there being no \*\*\*\* which produces a liquid spill, and assembling a diaper is also easy.

[0024] Moreover, the disposable diaper for males of this invention can perform wearing actuation of a diaper, without checking the rear-face side (backseat side) of a diaper, since the fixing section for the assembly of a diaper is prepared in one above-mentioned side flap.

[0025] Subsequently, with reference to drawing 6 - drawing 8, other gestalten of the disposable diaper for males of this invention are explained. Drawing 6 is the crosswise sectional view (drawing 3 </A> considerable Fig.) showing the 2nd gestalt of the disposable diaper for males of this invention here, drawing 7 is the crosswise sectional view ( drawing 3 equivalent Fig.) showing the 3rd gestalt of the disposable diaper for males of this invention, and drawing 8 is the crosswise sectional view ( drawing 3 equivalent Fig.) showing the 4th gestalt of the disposable diaper for males of this invention. In addition, about especially the point that is not explained in full detail, it is the same as the 1st gestalt mentioned above.

[0026] The disposable diaper 1 for males of the 2nd gestalt of this invention shown in drawing 6 consists of a top sheet 2 stuck on this backseat 3 so that the above-mentioned side flap 20 and 20' might \*\*\*\* the elastic member 6 and this elastic member 6 which were allotted on the above-mentioned backseat 3 and this backseat 3. And on the above-mentioned top sheet 2 in one above-mentioned side flap 20, the fixing section 30 applies a binder and is formed.

[0027] The elastic member 6 is formed only in above-mentioned side flap 20' of another side, and, as for the disposable diaper 1 for males of the 3rd gestalt of this invention shown in drawing 7, the above-mentioned water-repellent member 5 is stuck without an elastic member on the above-mentioned backseat 3 in the above-mentioned side flap 20.

[0028] The disposable diaper 1 for males of the 4th gestalt of this invention shown in drawing 8 consists of a top sheet 2 stuck on this backseat 3 so that above-mentioned side flap 20' of another side may \*\*\*\* the elastic member 6 and this elastic member 6 which were allotted on the above-mentioned backseat 3 and this backseat 3, and one above-mentioned side flap 20 consists of the above-mentioned backseat 3 and a top sheet 2 stuck on this backseat 3. And on the above-mentioned top sheet 2 in one above-mentioned side flap 20, the fixing section 30 applies a binder and is formed.

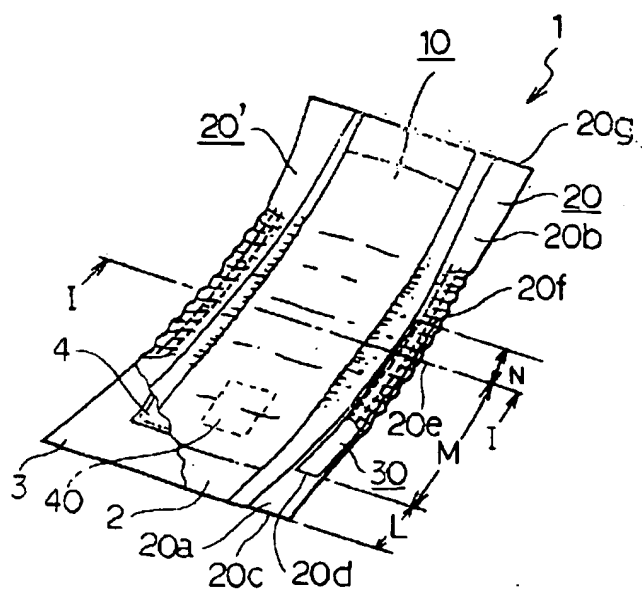
[0029] In addition, the disposable diaper for elasticity of this invention is not limited to the above-mentioned gestalt at all, and can be variously changed in the range which does not deviate from the meaning of this invention.

[0030]

[Effect of the Invention] The disposable diaper for males of this invention cannot be mistaken in the assembly of a diaper at the time of wearing, and can perform it, and, moreover, a liquid spill cannot produce it easily.

[Translation done.]

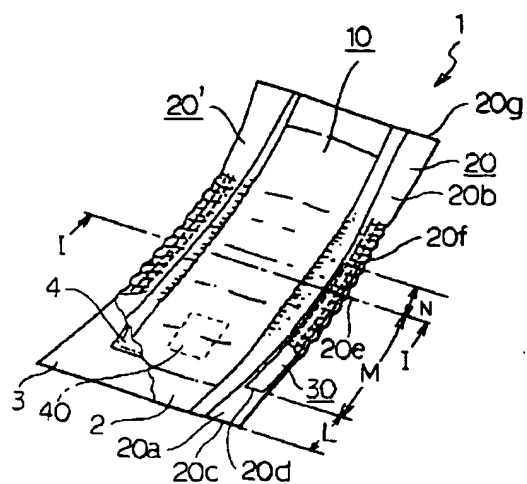
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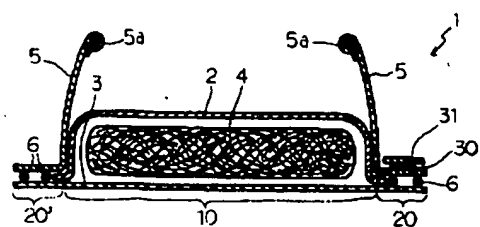
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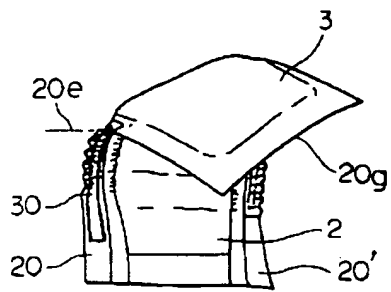


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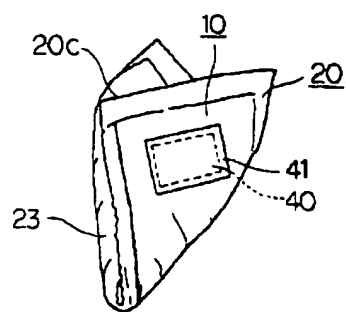
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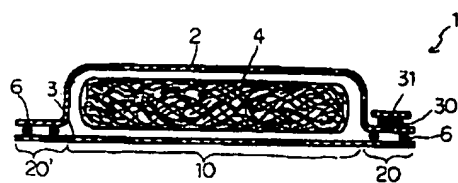
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Drawing selection drawing 5



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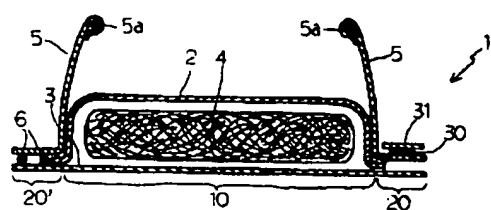
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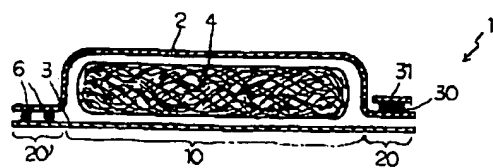
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Drawing selection drawing 8



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